1. Solve the quadratic equation below. Then, choose the intervals that the solutions belong to, with $x_1 \leq x_2$ (if they exist).

$$11x^2 + 11x - 7 = 0$$

A. $x_1 \in [-16.2, -14.2]$ and $x_2 \in [3.1, 6.4]$

B. $x_1 \in [-2.4, -1.3]$ and $x_2 \in [-0.1, 1]$

C. $x_1 \in [-22.2, -21.1]$ and $x_2 \in [19.1, 21.3]$

D. $x_1 \in [-0.5, 0.9]$ and $x_2 \in [0.8, 3.3]$

E. There are no Real solutions.

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2. Solve the quadratic equation below. Then, choose the intervals that the solutions $x_1$ and $x_2$ belong to, with $x_1 \leq x_2$.

$$25x^2 - 15x - 54 = 0$$

A. $x_1 \in [-6.24, -5.32]$ and $x_2 \in [0.19, 0.46]$

B. $x_1 \in [-3.77, -3.22]$ and $x_2 \in [0.53, 0.91]$

C. $x_1 \in [-1.14, -0.1]$ and $x_2 \in [5.22, 5.52]$

D. $x_1 \in [-2, -1.02]$ and $x_2 \in [1.49, 1.96]$

E. $x_1 \in [-30.79, -29.91]$ and $x_2 \in [44.88, 45.37]$

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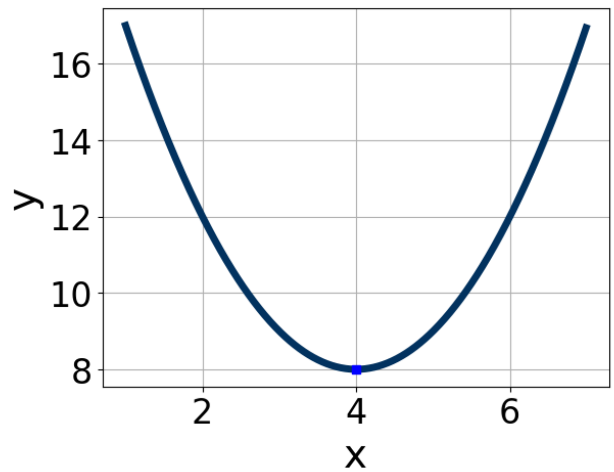
3. Write the equation of the graph presented below in the form $f(x) = ax^2 + bx + c$, assuming $a = 1$ or $a = -1$. Then, choose the intervals that $a, b$, and $c$ belong to.




A. $a \in [0.4, 1.7], \quad b \in [8, 10], \text{ and } \quad c \in [7, 10]$

B. $a \in [0.4, 1.7], \quad b \in [-12, -6], \text{ and } \quad c \in [23, 25]$

C. $a \in [0.4, 1.7], \quad b \in [8, 10], \text{ and } \quad c \in [23, 25]$

D. $a \in [-2.1, -0.5], \quad b \in [-12, -6], \text{ and } \quad c \in [-10, -5]$

E. $a \in [-2.1, -0.5], \quad b \in [8, 10], \text{ and } \quad c \in [-10, -5]$

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4. Factor the quadratic below. Then, choose the intervals that contain the constants in the form $(ax + b)(cx + d)$; $b \leq d$.

$$54x^2 - 69x + 20$$

A. $a \in [17.39, 19.25], \quad b \in [-7, -4], \quad c \in [2.94, 4.46], \text{ and } \quad d \in [-7, 0]$

B. $a \in [1.64, 4.34], \quad b \in [-7, -4], \quad c \in [26.04, 27.12], \text{ and } \quad d \in [-7, 0]$

C. $a \in [0.38, 1.41], \quad b \in [-48, -35], \quad c \in [-0.78, 2.24], \text{ and } \quad d \in [-27, -22]$

D. $a \in [5.38, 6.58], \quad b \in [-7, -4], \quad c \in [8.38, 9.36], \text{ and } \quad d \in [-7, 0]$

E. None of the above.

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5. Solve the quadratic equation below. Then, choose the intervals that the solutions $x_1$ and $x_2$ belong to, with $x_1 \leq x_2$.

$$15x^2 + 8x - 16 = 0$$

A. $x_1 \in [-3.04, -2.28]$ and $x_2 \in [0.32, 0.62]$

B. $x_1 \in [-0.72, -0.03]$ and $x_2 \in [1.57, 1.93]$

C. $x_1 \in [-4.06, -3.53]$ and $x_2 \in [0.19, 0.38]$

D. $x_1 \in [-20.1, -19.82]$ and $x_2 \in [11.94, 12.01]$

E. $x_1 \in [-1.53, -0.75]$ and $x_2 \in [0.64, 1]$

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6. Solve the quadratic equation below. Then, choose the intervals that the solutions belong to, with $x_1 \leq x_2$ (if they exist).

$$17x^2 - 12x - 3 = 0$$

A. $x_1 \in [-3.49, -3.15]$ and $x_2 \in [14.83, 15.69]$

B. $x_1 \in [-0.77, 0.22]$ and $x_2 \in [0.7, 1.97]$

C. $x_1 \in [-19.05, -17.7]$ and $x_2 \in [17.59, 19.71]$

D. $x_1 \in [-1.08, -0.56]$ and $x_2 \in [0.04, 0.28]$

E. There are no Real solutions.

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7. Factor the quadratic below. Then, choose the intervals that contain the constants in the form $(ax + b)(cx + d); b \leq d$.

$$36x^2 - 60x + 25$$

A. $a \in [5.04, 6.88], \quad b \in [-6, -3], \quad c \in [2.7, 6.4],$ and $\quad d \in [-7, -4]$

B. $a \in [17.88, 18.99], \quad b \in [-6, -3], \quad c \in [1.8, 2.9],$ and $\quad d \in [-7, -4]$

C. $a \in [2.15, 3.81], \quad b \in [-6, -3], \quad c \in [9, 12.3],$ and $\quad d \in [-7, -4]$

D. $a \in [0.87, 1.65], \quad b \in [-35, -27], \quad c \in [-1.3, 1.3],$ and $\quad d \in [-33, -21]$

E. None of the above.

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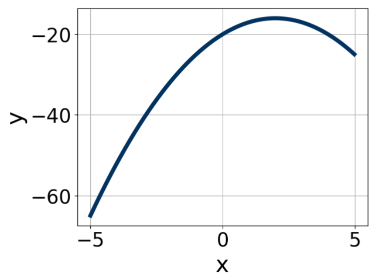
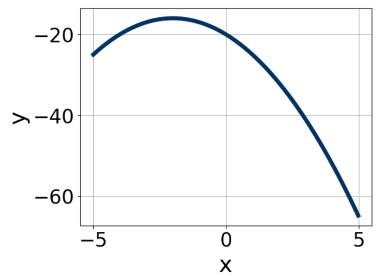
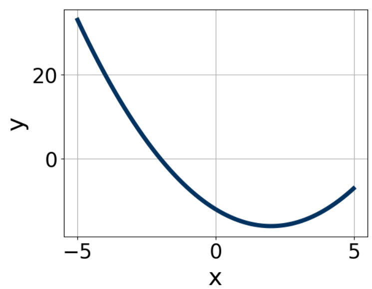
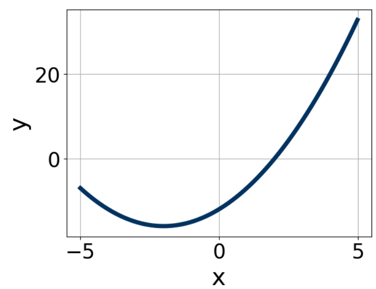
8. Graph the equation below.

$$f(x) = -(x+2)^2 - 16$$

A. 


C. 


B. 


D. 


E. None of the above.

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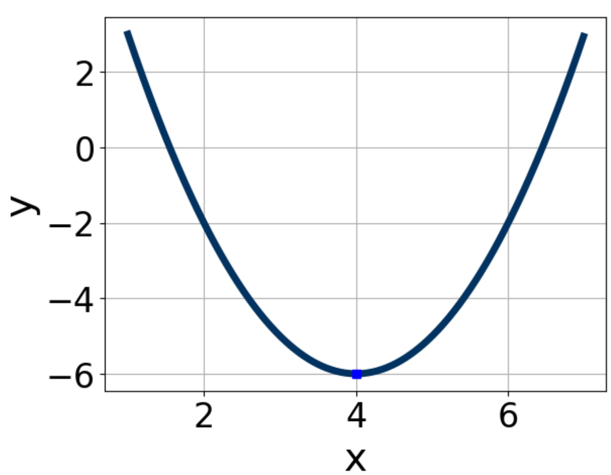
9. Write the equation of the graph presented below in the form $f(x) = ax^2 + bx + c$, assuming $a = 1$ or $a = -1$. Then, choose the intervals that $a, b,$ and $c$ belong to.



A. $a \in [0, 4], \quad b \in [-8, -6], \text{ and } \quad c \in [7, 14]$

B. $a \in [-1, 0], \quad b \in [-8, -6], \text{ and } \quad c \in [-24, -21]$

C. $a \in [0, 4], \quad b \in [5, 10], \text{ and } \quad c \in [7, 14]$

D. $a \in [0, 4], \quad b \in [5, 10], \text{ and } \quad c \in [21, 23]$

E. $a \in [-1, 0], \quad b \in [5, 10], \text{ and } \quad c \in [-24, -21]$

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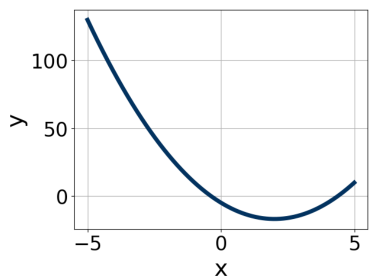
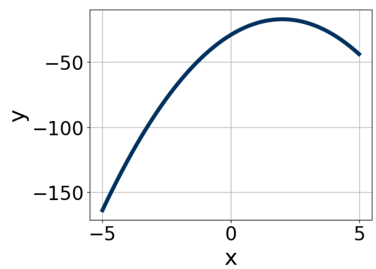
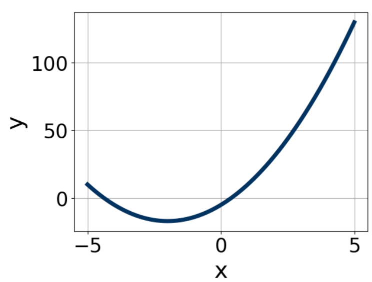
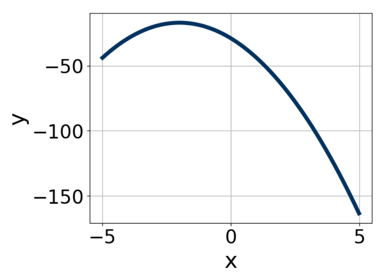
10. Graph the equation below.

$$f(x) = (x + 2)^2 - 17$$

A. 


C. 


B. 


D. 


E. None of the above.

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